

Notice of Allowability

Application No.

09/670,855

Applicant(s)

BROWN, JOHN MICHAEL

Examiner

Esaw T Abraham

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 06/25/04.
2. ☒ The allowed claim(s) is/are 9-12 and 14-34 (renumbered as 1-25).
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☒ to Paper No./Mail Date 14.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

***** The 112, second paragraph rejection made in the previous non-final office action to reject claims 17 and 24 is withdrawn by the examiner.

*****Claims 9 and 25-27 have been allowed in the previous non-final office action made on 03/19/2004.

*****Previously presented claims 10-12, 14-24, and new added claims 28-34 have been allowed.

Examiner's statement for reason for allowance

The following is an examiner's statement for allowance:

1. Claims **10-12 and 14-34** have been allowed.

As per claim **10**, the prior art of record (Ruparel U.S. PN: 5,689,517) in figure (1b) teaches a circuit (see element 15) comprising a first clock domain (10a) comprising first edge triggered memory device (11a) for receiving first data input signal (see SCAN-IN input and clock signal CLK A) to produce first output signal and coupled to a first latch (12a) for outputting first output signal; second clock domain (10b) comprising a second edge triggered memory device (11b) for receiving a second input data and to produce third output signal (see line between 11b and 12b) coupled to a second latch (12b) for outputting forth output signal (see the line L2). However, the prior art taken singly or in combination fail to teach, anticipate, suggest, or render obvious combinatorial logic configured to receive each of the functional data signal and the second output signal from the first latch and configured to produce a combinatorial logic output signal and a multiplexor configured to receive each of the

Art Unit: 2133

combinatorial output signal and a scan data input signal; a second clock domain configured to receive the second output signal from the first clock domain and comprising a clock domain and comprising a second edge triggered memory device configured to receive a second data input signal, and configured to produce a third output signal in response to a second clock signal; and a second latch configured to receive the third output signal from the second edge-triggered memory device and configured to produce a fourth output signal in response to the test clock signal. Consequently, claim 10 is allowed over the prior art.

Claims **11, 12, and 14-17**, which is/are directly or indirectly dependent/s of claim 10 are also allowable over the prior art of record.

As per claim **18**, the prior art of record (Ruparel, U.S. PN: 5,689,517) in figure (1b) teaches plurality of clock domains (see 10a-10c) coupled to each other through a test path (see the connections between the clock domains (SCAN-IN to SCAN-OUT)) to receive a functional data and a clock signal (see SCAN-IN and CLK A and CLK B) wherein each of the clock domain comprises a test clock and a test data (see SCAN-IN and CLK A and CLK B) for producing an output data (SCAN-OUT). However, the prior art taken singly or in combination fail to teach, anticipate, suggest, or render obvious plurality of clock domains comprises a test clock input placing the test clock, a test data input for receiving test data (SDI), a test data output (SDO) a test selection input for enabling a test mode (ST); and a plurality of inter-domain test latches arranged in the test path, wherein each of the plurality of the inter-domain test latches is configured to pass data when the test clock is in a first state and configured to hold data when the test clock is in a second state. Consequently, claim 18 is allowed over the prior art.

Art Unit: 2133

Claims **19-24**, which is/are directly or indirectly dependent/s of claim 18 are also allowable over the prior art of record.

As per claim **28**, the prior art of record (Ruparel U.S. PN: 5,689,517) in figure (1b) teaches a circuit (see element 15) comprising a first clock domain (10a) comprising first edge triggered memory device (11a) for receiving first data input signal (see SCAN-IN input and clock signal CLK A) to produce first output signal and coupled to a first latch (12a) for outputting first output signal; second clock domain (10b) comprising a second edge triggered memory device (11b) for receiving a second input data and to produce third output signal (see line between 11b and 12b) coupled to a second latch (12b) for outputting forth output signal (see the line L2). However, the prior art taken singly or in combination fail to teach, anticipate, suggest, or render obvious a second clock domain configured to receive the second output signal from the first clock domain and comprising a clock domain and comprising a second edge triggered memory device configured to receive a second data input signal, and configured to produce a third output signal in response to a second clock signal; and a second latch configured to receive the third output signal from the second edge-triggered memory device and configured to produce a fourth output signal in response to the test clock signal, wherein the second clock domain is configured to receive the second output signal from the first latch at a multiplexor. Consequently, claim 28 is allowed over the prior art.

Claims **29-34**, which is/are directly or indirectly dependent/s of claim 28 are also allowable over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

Art Unit: 2133

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

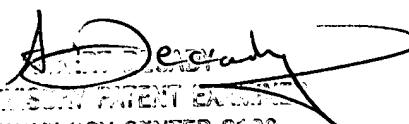
2. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Esaw Abraham whose telephone number is (571) 272-3812. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are successful, the examiner's supervisor, Albert DeCady can be reached on (571) 272-3819. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for after final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Esaw Abraham

Art unit: 2133


ALBERT DECADY
SUPERVISOR, PATENT EXAMINER
TECHNOLOGY CENTER 2100